



**POSITION PAPER: Approved Physiologic Fluids for Basic Transport**

**DATE: Approved by the Governor's Advisory Board  
05-06-2005**

**Definitions:**

Intravenous solutions are any solution that is put through the IV to include water, salt, potassium, glucose and other minerals.

**Background:**

EMT-Basic and EMT-Enhanced providers may at times be asked to transport a person who has established intravenous access and solutions being administered. This situation occurs most frequently during interfacility transports with pre-established flow rates.

This position paper serves to help delineate which patients can be transported by basic life support units.

Other than physiologic solutions (i.e., lactated ringers) and medications as noted in this document, solutions with additional levels of potassium and/or medications will not be allowed under this protocol.

Licensed ground ambulance requirements must be met before transporting a patient with established intravenous access that is either placed to lock or has solutions running through it.

Once vehicle requirements are met, approved continuous IV solutions, medications and minerals for use:

1. Normal saline solutions (NSS – 0.9%)
2. Lactated ringers
3. D5 ½ NSS (0.45%)
4. D5 ¼ NSS (0.25%)
5. D5 ⅓ NSS (0.33%)
6. ½ NSS
7. ⅓ NSS
8. ¼ NSS
9. D5LR
10. Multi-vitamins added to any of the above
11. Thiamine added to any of the above.

EMT-Basic and EMT-Enhanced providers are to receive specific training on the handling of patients with established IVs. This includes specific training for patients who have a central line.

Any provider using these fluids will need extra training above their normal certification level. The training program should be created in concert with the agency's Operational Medical Director (OMD). Also, each provider should be "signed off" on the protocol by their agency OMD after training has been completed.

A training program for fluid use by EMT-Basic and EMT-Enhanced providers should include a minimum of several items:

- 1) Purpose of training
  - a. To maintain established intravenous lines. (Not to adjust rates, change types of fluids, or hang additional fluids for longer transports)
- 2) Interpretation of fluid names
  - a. i.e. Providers should have an idea of what (NS) normal saline solution, (KCl) potassium chloride, etc., represent
- 3) Specific training on monitoring of intravenous lines both peripheral and central
  - i. Identify infiltration and take proper action
  - ii. How to turn off fluids
  - iii. What to do if "blood backs up the line"
  - iv. What to do if pump keeps turning off - leave it off
  - v. Rates should be carefully monitored
- 4) Central line issues
  - a. Air embolus
  - b. Accidental dislodgment during transport and bleeding
    - i. Understand that heart arrhythmias may occur if the catheter is accidentally pushed into far.
  - c. Identify "air in the line" - prevent air embolus
  - d. A newly inserted central line has risk of pneumothorax
    - i. Patient will need extra observation if freshly placed (within 6 hours)
- 5) Provider should be shown a sample central line to help in understanding
  - i. Length
- 6) Emphasis should be placed on not transporting patients with additional potassium in their solutions
- 7) Documentation
  - a. i.e. "Intravenous infusing without incident"
- 8) Recertification in the program